How can we improve HIV and STD Prevention Online for MSM?

Assessing the Preferences of Website Owners, Website Users, and HIV/STD Directors

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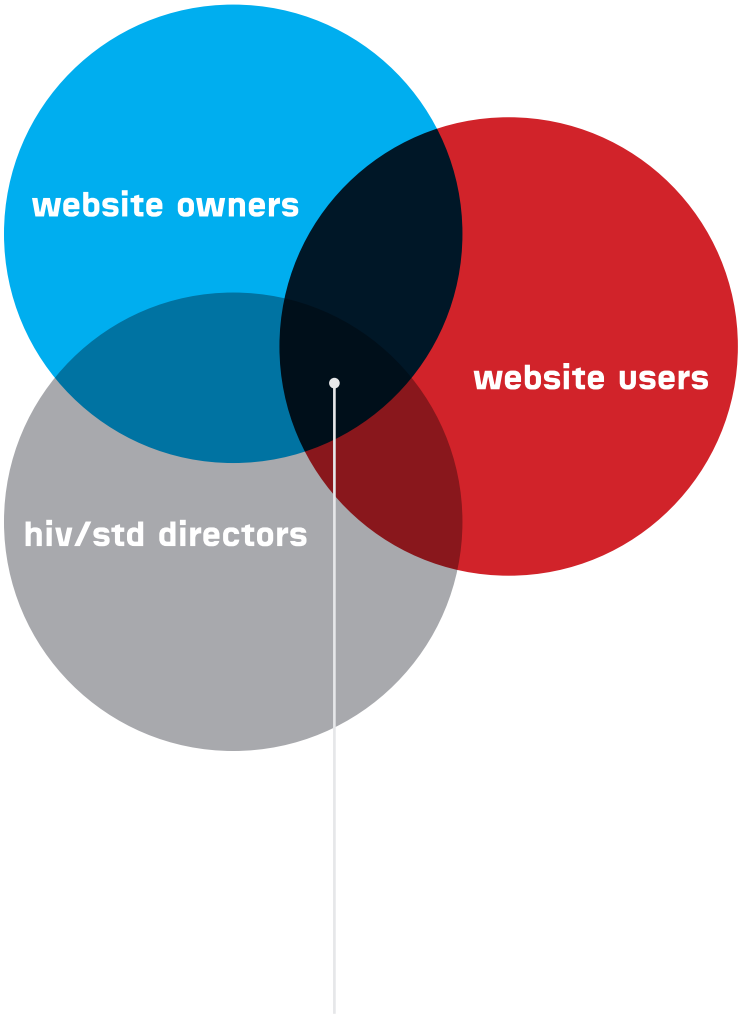

Strategies to reduce STD and HIV transmission among men who meet partners online have typically been created without consultation with website owners or users. The public health field has relied heavily on behavioral interventions, and has not fully leveraged the internet's assets in disseminating information efficiently, or helping men who have sex with men (MSM) make informed choices about their partners. The lack of coordinated approaches between website owners and public health has had negative consequences for both website owners and public health efforts and strained relationships between them.

To help build consensus about how to prioritize interventions, we wanted to identify potential interventions and strategies that have the support of the owners of dating and hook-up websites used by gay, bisexual and trans men; the users themselves, and HIV/STD directors in the United States.

We developed a list of 41 behavioral and structural online prevention strategies by reviewing current websites, literature, and conducting focus groups. We asked website owners (n=18) about their willingness to participate in, or support these strategies; users (n=3050) about their willingness to use them; and HIV/STD directors (n=82) about their perceptions of their potential impact on HIV/STD transmission.

A majority of all three stakeholder groups expressed high levels of support for eight strategies. These included allowing users to filter partners by their profile information; including a specific sub-section or chat room of a website for men with specific sexual interests ("safe sex only," "barebacking," "HIV-positive", etc.); including safe sex preferences as a profile option; access to sexual health experts; access to sex-positive videos, showing men dealing with issues like safe sex, telling someone their HIV status, or related issues; an online STD testing directory searchable by zip code; automatic reminders at intervals of users' choice to get tested; and e-cards to notify partners of a potential exposure to an STD.

By moving ahead on the eight behavioral and structural strategies on which all stakeholders agreed, STD and HIV prevention efforts will be more consistent across websites, hopefully resulting in greater utilization of prevention strategies by users, and better utilization of resources. Website owners and public health directors will be better able to develop productive partnerships. Data about user willingness may also be helpful in finding areas of agreement regarding strategies that website owners are currently less likely to support, and provide guidance as to how to modify them in ways that will be accepted by all.

This report contains 9 sections. The first provides background on the role of the internet in HIV and STD transmission and prevention. The second, which describes how this study builds on previous prevention efforts, is on page 6. The methodology of this study can be found on page 7, and the results on page 10. Our suggestions for next steps may be found on page 26.

1. Filter partners by their profile information
2. Online STD testing directory by zip code
3. Subsection of sites for specific sexual interests
4. Include safe sex preference as a profile option
5. Access to sexual health experts
6. Access to sex-positive videos
7. Automatic testing reminders
8. Online partner notification

Background

In many areas of public health, industry frequently assigns responsibility to individuals; public health often assigns responsibility to industry; and individuals assign responsibility to both. We believe that the only way to succeed in promoting public health, and more specifically, to reduce STD and HIV infections, is to seek ways in which all three stakeholder groups can share responsibility and to play to each of their strengths. In this study, we found that all three groups were willing to participate in prevention efforts, and in very specific ways. For example, public health is willing to create and maintain directories of STD test sites; websites are willing to have links to them; and users are willing to access them.

How does the internet affect HIV and STD transmission?

A high percentage of MSM look for new relationships, both casual and romantic, on dating and hook-up websites. The internet makes it easier for men to search for partners. It can also make it easier for sexually transmitted diseases (STDs), including HIV, to spread. But the internet also has a great, yet not fully realized potential to prevent disease transmission.

Studies of risk on the internet show that MSM who use the internet to find sex partners are more likely to report unprotected anal intercourse with non-primary partners compared to other MSM and more likely to report a previous sexually transmitted infection. [1-3]

However, over time, it appears that the difference in risk between internet users and non-internet users may be diminishing and that using the internet may not be as strongly associated with higher rates of sexually transmitted diseases as before. [4] One hypothesis for this change is that when dating websites were first created, higher-risk individuals with higher numbers of partners quickly began looking for partners online. Over time, lower-risk individuals also turned to the internet because it was an easy, inexpensive way of looking for new partners. This reduced the average level of risk among internet users. (Rietmeijer, personal communication.)

While the effect of the internet on individuals' risk may be unclear, its effect at the population level deserves our close attention. There are several characteristics of the internet that make it important for HIV and STD prevention.

The internet makes social networks bigger – and denser. The internet's power comes from its ability to link people together to exchange information, engage in political activities, play computer games against opponents anywhere in the world, buy and sell merchandise, and meet new romantic and sexual partners outside one's immediate social circle. In some areas of the country, particularly rural areas with few organizations or bars, the internet may be one of the few ways MSM can meet. In large cities with established gay neighborhoods, organizations, bars and clubs, the internet provides an additional venue for men to meet new partners or find men with similar interests. The internet reduces the degrees of separation between individuals who take a great deal of risk, and those who do not, as well as between someone infected with an STD and someone who is not. [5] In one study in Los Angeles among users of one highly popular website, researchers found that no one was further than two degrees of separation away from a user diagnosed with syphilis. [5]

Furthermore, the internet shortens the distance between high-prevalence and low-prevalence areas. The following scenario illustrates this point: John frequently has unprotected sex in a city with high HIV prevalence, such as San Francisco or New York. He then has sex with Kevin, who takes few risks but happens to take one with John. Kevin then travels to Wyoming, where there are no gay bars, and meets Tom online. Tom is now just a degree of separation away from John's fast-lane network. While the internet is often described as a virtual reality, its viral importance is real.

Low Threshold Entry. Most dating and hook-up websites offer memberships for free or for a low cost. Memberships may cost no more than the cost of one or two drinks. Because of this, dating and hook-up sites are accessible to a wide variety of men. It's common for users to search for partners on multiple sites.

All of these factors help increase the potential for the transmission of sexually transmitted diseases. Indeed, in some health jurisdictions, by 2002, the internet overtook bathhouses, sex clubs, and bars, as the most frequently named type of venue where individuals diagnosed with syphilis reported meeting partners. [6]

Wide reach. The internet allows for communicating messages quickly and inexpensively to large numbers of people, and for tailoring those messages to individuals with different demographic characteristics or preferences.

More methods for choosing partners and disclosure. Users' profiles allow users to disclose information in a way that may be more comfortable than it would be face-to-face, as well as search for partners with characteristics they desire. Users can look for partners with specific interests, occupations, or search by age, ethnicity, religion, or educational background. They can also exchange information about their preferences for sex with or without condoms, HIV and/or STD status, or drug and alcohol use. To the extent that users describe themselves truthfully, this allows them to make more informed decisions about their partners.

Additionally, users can join sites that cater to men with specific preferences or characteristics. On those sites that

cater to a wide variety of men, they can often search for a specific chat room or area within that site to look for a specific type of partner. Sites and subsites exist for men of a particular age group, ethnicity, men who choose unprotected, "bareback" sex, HIV-positive men, and escorts. These are all strategies that men have adopted to help find partners who they find attractive. For example, this enables men who are intentionally seeking unprotected sex to find each other more easily and may reduce the likelihood that someone who is looking for protected sex would inadvertently partner with someone looking for unprotected sex.

Sustainability. Profile screens and specific sites, as well as other features, are built into the structure of many websites. Once they exist, they require no ongoing investment of public health resources. Furthermore, these strategies do not require individuals to interrupt their search to participate in a more formal intervention.

What should be done?

There is no consensus about which HIV/STD prevention strategies will be most effective, or are likely to be accepted by website owners and users. This has resulted in public health programs funding many interventions that may get used by only a small minority of men, meaning that we may expect to see the same low levels of participation online that many of our offline interventions attract. In one national study, for example, only one percent of men who were in baths or bars ever participated in individual-level interventions. [7] It critical to use data to drive programs, and to strategically invest resources where they are likely to have the biggest impact at the population level.

Doing so will require that interventions not only address users' individual risks and attempt to change them. It will also mean that interventions be designed to create environments that support healthy decision-making and behaviors. This assures consistency with the very mission of public health: to "fulfill society's interest in assuring conditions in which people can be healthy." [8]

A Brief History of STD and HIV Prevention Online

While public health prides itself on "meeting people where they are," practitioners often attempt to bring the people to them, hoping they will come to their educational programs and clinical services.

A similar dynamic marked the first decade of creating HIV and STD prevention interventions online. Many health departments funded outreach projects, in which trained volunteers or staff sought to engage individuals in conversations, offer referrals, and provide social support for healthy behaviors.

Other practitioners developed videos with characters grappling with challenges they faced when looking for new partners in the midst of an epidemic, such as consistent condom use or disclosing their HIV status. [9]

Researchers often initiated and evaluated their own interventions. [10, 11] Many of these studies measure the effects of each intervention, or compare the effects of one intervention to another. While researchers conducted some feasibility studies about one type of intervention, such as messages or partner notification [12, 13], public health efforts have largely been hampered by not knowing which interventions users prefer and in which they are more likely to participate.

HIV/STD directors and website owners have limited knowledge about how men with different demographic characteristics would participate. Would men of different ethnicities or races participate at the same rate? Would both HIV-positive and HIV-negative men?

Importantly, would men who are at very high risk of acquiring or transmitting an STD participate at the same rate as men who rarely or never have unprotected sex and have only one or two partners?

HIV and STD preventionists are increasingly interested in structural interventions, which aim to modify the social, economic and political structures, and physical environments, in which we live. [14-16] These changes may directly or indirectly affect individuals and can be sustained over time, even when key actors are no longer involved. [17] They can exist both offline and online.

This interest, in part, comes from a growing acceptance of the limits of behavioral interventions [18-20] and the need to complement them with interventions which help build supportive environments for intervention goals. Additionally, structural interventions – such as a banked highway curve - can often reduce the risk of individuals who may never choose to participate in a behavioral intervention. Unfortunately, public health has often lacked data about the acceptability of structural or many behavioral interventions among community members, including in HIV and STD prevention.

While there is a growing acceptance of the need to consider the impact of the environment on individual behaviors, there has been less progress in considering how to leverage or change current environments to promote healthy behavior and to reinforce behavioral messages and strategies. When it comes to the internet, there has been a great deal of concern about its potential. Yet most of the focus of public health has been on how to adapt its well-honed messaging, outreach, and partner notification strategies to the internet. They have, for the most part, not considered which benefits even minor structural changes might yield.

Partnerships Between Public Health and Websites

HIV and STD program directors have made important strides towards building strong partnerships with website owners. For example, some sites routinely allow public health departments to maintain a user profile in order to conduct partner notification and outreach online. There has been considerably less discussion about other potential interventions, including which profile fields will have the biggest impact, or how to help users find HIV test sites near them.

Relationships between websites and HIV/STD directors often suffer from a low degree of mutual understanding. HIV/STD directors have little understanding of the business of running a dating website. They may have little or no knowledge of the technology used to run the sites, sites' capabilities and

limitations, or their business models and how they compete in the marketplace. On the other hand, website owners usually have little knowledge of how to design health promotion programs, different models of HIV and STD prevention programs, funding streams, or the strengths and limitations of government and community-based organizations.

This lack of mutual understanding hampers successful prevention efforts. While many website owners and managers want to assist HIV/STD programs, they often lack the criteria by which to judge the suggestions they receive. Owners report having to respond to many, often contradictory, requests. For example, one state health department may want to conduct a certain type of outreach, while a local health department may want to conduct partner notification, and still another may want to develop a video. Other health departments and community-based organizations may present ideas for interventions or strategies which are technologically unfeasible, or present them just after a site has rebuilt its website, when it is the least likely to be receptive to incorporating more changes.

This lack of coordination also can lead to health departments' not investing their resources as strategically as they could. For example, in several instances, local health departments have placed a banner ad or link encouraging website patrons to seek out information or testing. Since the website was unable to target that advertisement to a specific jurisdiction, the department has had to field questions from around the country and even from other countries.

What This Study Contributes

The goal of this project was to identify potential interventions and strategies that have the support of website owners, users and HIV/STD directors.

This study brings together, for the first time, the voices of as broad a cross-section as possible of the three main stakeholders when it comes to preventing STD and HIV transmission online: website users, website owners, and HIV and STD program directors.

It builds on attempts by individual health departments, and the CDC, to partner with one or two websites, by including 18 websites representing the majority of the most popular sites in the country. For too long, HIV/STD directors have attempted interventions with little input from the website owners, and little knowledge of what their sites can contribute to prevention. We hope that by bringing their voices to the table, we can leverage as many strengths of their sites as possible.

Second, it brings together a large number of HIV/STD leaders from around the country. While several HIV and STD program directors have pioneered new interventions online, others have not participated in the dialogue about online prevention. It is our hope that by involving more practitioners, it will be easier to coordinate requests to the website owners.

Third, and most importantly, this study brings in the voices of the users. There has been little effort paid towards assessing the level of interest among users for prevention efforts; one notable exception was Rebchook's 2004 study which found low levels of awareness of prevention resources among MSM online. [21] Hooper, et al, found high levels of support for explicit HIV education among users of Gay.com. [22] But for the most part, public health professionals have been designing interventions – both online and off – with little knowledge of what users want. Additionally, some relationships between HIV/STD program directors and website owners have been strained. While some of this is a natural outgrowth of different perspectives and missions, having the voices of the consumers will help assure that assertions are based on data, in addition to well-informed opinions.

This study did not attempt to measure the effectiveness of different interventions or strategies. We hope, however, that it helps both health departments and owners prioritize which strategies have the most support from all three stakeholders, and motivate researchers to contribute their expertise to evaluating them further.

These findings include the identification of eight strategies that all three stakeholders supported. HIV/STD directors believe they are important to reducing disease transmission; website owners believe they are feasible (and in some cases, are already doing them); and users say that they would accept and utilize them.

This study also identifies strategies about which stakeholders disagree. We hope that these findings help spark focused conversations between HIV/STD directors and website owners to help understand the reasons for these differences. Some differences may never be resolved. But we expect that with further dialogue, some of these strategies, perhaps by being modified, will be more acceptable to all parties. And where there is opposition based on a perception that users will reject the idea, we hope that the voices of the users themselves, which we've sought out, will help shed light on these disagreements.

This study also is a significant departure from prior work in which either health departments or community-based organizations assumed most of the costs of interventions, or arguments which assigned all responsibility to the website owners. Rather, it is seeking to contribute to our knowledge of how to reduce risk of transmission through intervening at multiple levels – individual, group, community, and structural.

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The Study

Methods

We designed three surveys, each with the same set of intervention strategies for the three stakeholder groups. For each strategy, we asked website owners about their level of willingness to participate or host it on their site. We asked HIV/STD directors about their perception of the level of impact the strategy would have on reducing disease transmission. We asked website users how likely they would be to use or participate in that strategy.

To develop the list of strategies, we employed several techniques. First, we reviewed many of the current online strategies, those which had been part of earlier studies, as well as those which were suggested in discussions but never, to our knowledge, developed. We deliberately included both behavioral and structural interventions and strategies.

Second, we consulted with numerous experts in the area of developing and implementing online risk-reduction interventions and strategies to review our list.

Third, we relied on data from our focus groups with gay and bisexual men in San Francisco in 2008. During these groups, we asked for feedback on numerous strategies, gaining insight as to how to augment or alter current interventions.

This project was approved by the University of California at San Francisco Committee on Human Research. We launched the website owner and HIV/STD director surveys in November 2009. We deliberately launched these surveys before the user survey, to allow an opportunity to get suggestions, through open-ended questions, for additional strategies about which we could then solicit feedback from users. We included these new items in the user survey, which we launched in March 2010.

Each participant was asked to rate 41 different online strategies for reducing HIV and STD transmission on a 5-point Likert scale. Each stakeholder group rated strategies using a different scale, as shown in Table 1.

Table 1.

STAKEHOLDER	SCALE
Website owners/ managers	Willingness to participate in or support providing services or strategies *Very unwilling, unwilling, neutral, willing, very willing, n/a*
Website users	Likeliness of using services or strategies *Very unlikely, unlikely, neutral, likely, very likely, uncertain*
HIV/STD directors*	Perception of how much the services or strategies would increase or decrease HIV, and separately, STD transmission *Substantial increase, some increase, no impact, some decrease, substantial decrease, don't know/not applicable*

** In order to shorten the survey and increase response rate, in some cases we asked the HIV/STD directors to choose their top two out of five strategies rather than rate each strategy individually. The results from these questions were compiled and analyzed so that they could be compared to the results from the web owner and web user surveys.*

Recruitment

We tailored recruitment strategies to each of the three stakeholder groups.

Website owners:

We developed a comprehensive list of gay-oriented dating and hook-up sites, as well as mixed gay/straight sites on which MSM meet partners. To be eligible, all sites had to have users in the US, although several of them were based in other countries.

For all sites, we attempted to recruit the most senior person available; some sites delegated the responses to someone else who was more knowledgeable about these issues. When sites invited several staff to give input, they understood that only one survey could be submitted.

Figure 1. Breakdown of HIV/STD Directors who responded to survey (n=82):

STD/HIV Directors 50%	STD Directors 20%	HIV Directors 17.5%	Other Role 12.5%

We recruited website owners and managers by sending e-mail invitations to participate, and followed up with telephone calls. We invited all 31 website owners for whom we were able to locate contact information to participate in the survey; 18 completed it (58%).

Those who completed the survey represent sites both large and small. Some are exclusively for gay and bisexual men; others target individuals of all sexual orientations. Some of the sites serve men specifically looking for unprotected sex. Some cater to specific demographic groups. While some promote dating, others primarily serve men looking for brief encounters or hook-ups, or male escorts and masseurs. According to data from commercial services such as Compete.com and Quantcast.com that report web traffic, the number of unique visitors to sites ranged from fewer than 1,000 per month for smaller, more targeted sites, to more than 700,000 per month for some of the largest sites.

HIV/STD directors:

We invited all members of the National Coalition of STD Directors (NCSD) and National Alliance of State and Territorial AIDS Directors (NASTAD) to participate. Eighty-two (76% of HIV/STD directors) completed the survey. (Figure 1).

Website users:

To recruit website users, we developed and field-tested banner ads and placed them on gay dating and hook-up sites and Facebook. See figure 2 for examples of the ads:

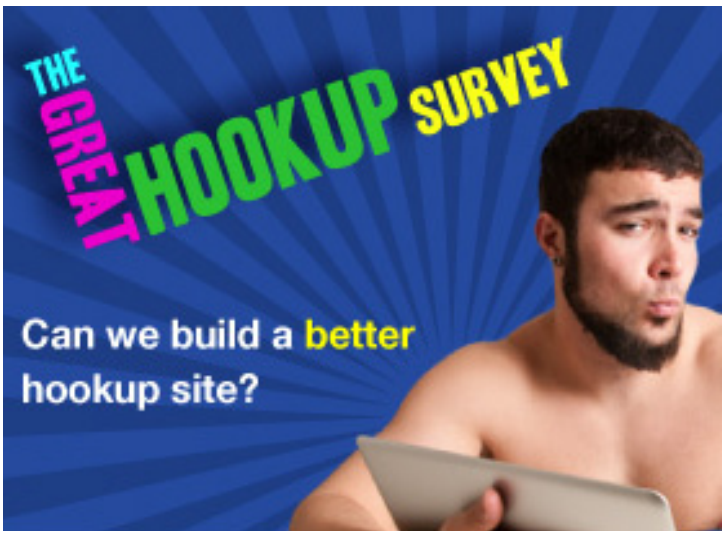
Eligibility criteria for participation included: being over 18 years of age, living in the United States, identifying as male or female-to-male transgender (transmale), and having looked for a male sex partner online in the previous six months. We established targets to ensure representation from typically under-represented groups: MSM in the ten states with the fewest same-sex couples, primarily rural; [23] African American MSM; MSM less than 25 years of age; HIV-positive individuals; and individuals with high-risk sexual practices (which we defined as unprotected anal sex with two or more partners of unknown or opposite HIV status in the previous six months). We did not offer incentives for participation.

We enrolled 6,896 men during eight weeks of recruitment. During the seventh week, we also contacted three organizations whose members included men in underrepresented groups, such as Asian/Pacific Islanders. These organizations sent e-newsletters to their members inviting participation in the survey.

A total of 6,032 (87%) of those who consented to participate in the survey went on to answer the first question. Fifty-one percent (n=3,050) of those who began the survey completed it.

While there is no representative national sample of MSM who meet partners online to compare to our sample, we were able to compare our data to data gathered for another large internet-based study. See figure 3 for website user respondent demographics.[24] Geographically, our samples were quite similar. However, we reached a lower percentage of Latinos and a higher percentage of White participants.

Figure 2.



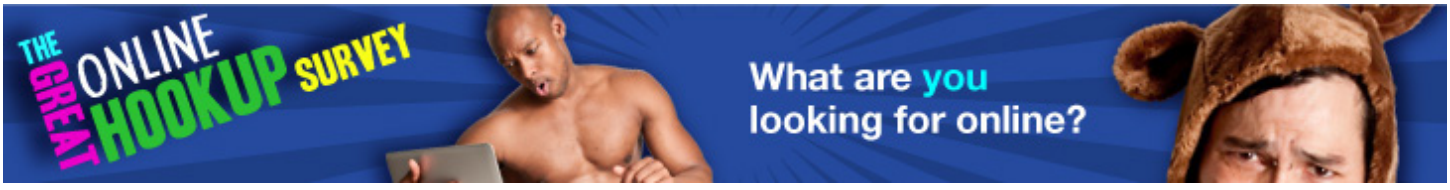
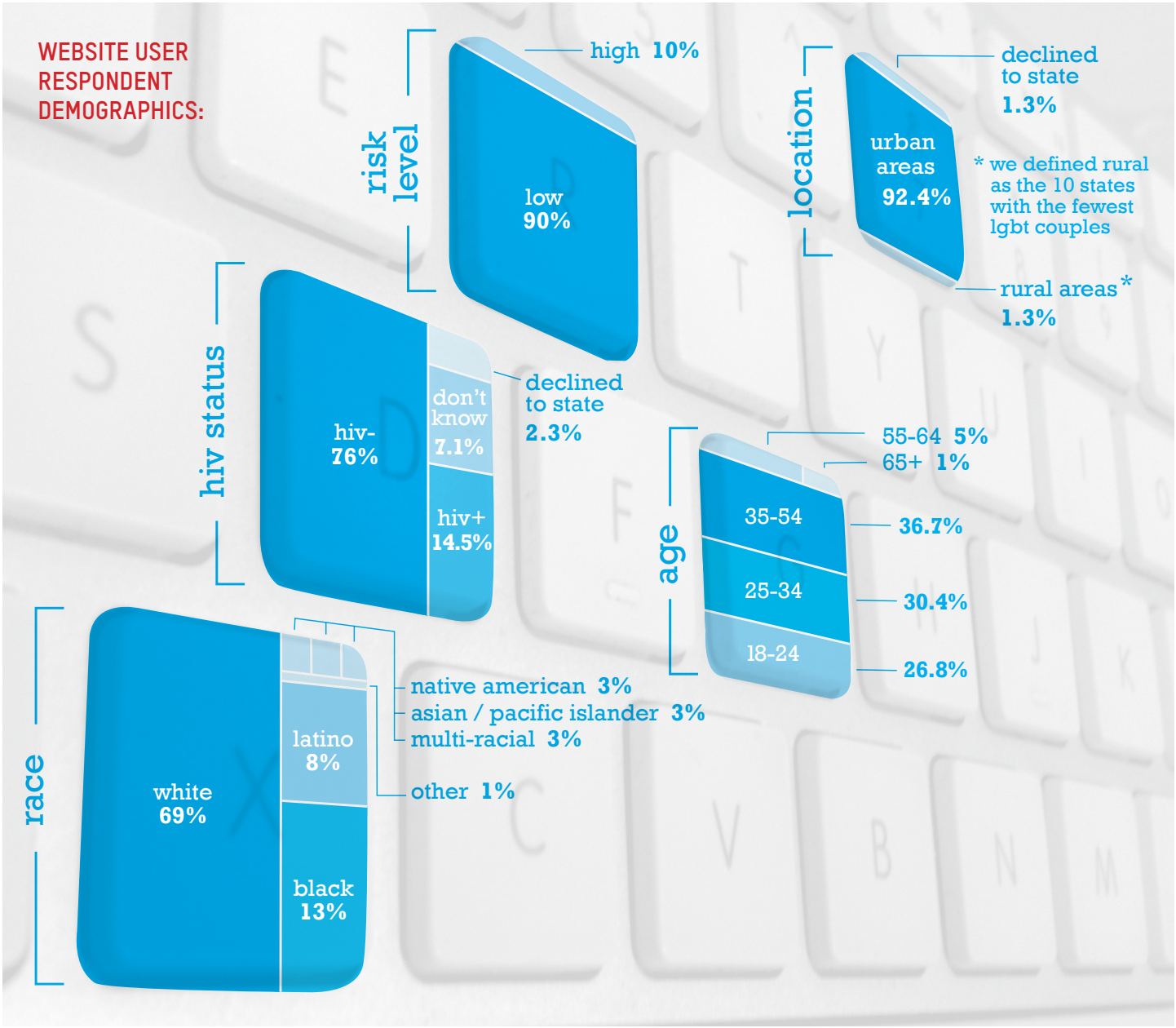


Figure 3: Demographics of participants for user survey



Additionally, we compared our sample to national MSM population size estimates generated by Lieb. Compared to Lieb's national estimates of MSM, [25] our data had a somewhat lower percentage of white participants (69% v. 71.4%) and significantly lower percentage of Latino participants (8% v. 15.9%), and a higher percentage of African American participants (13% v. 8.9%). We reached a greater percentage of participants who identified as "multiracial" or "other" (4% v. 0.6%). We recruited a similar percentage of Asian and Native American participants to those recruited in the national model. We recruited a slightly higher percentage (6.3% v. 4.9%) of participants who live in the 10 states with the fewest same-sex couples. The 14.5% of our sample who reported being HIV-positive is somewhat lower than that found nationwide among MSM. [26]

Analysis

We used SPSS to conduct the analysis. We generated separate reports for each of the three stakeholders' surveys, then identified areas of agreement and disagreement between the groups. We conducted stratified analyses for website users in order to see if any significant differences existed. We stratified by age, geography (states with fewest same sex couples vs. all others), race, HIV status, and level of risk behavior.

Findings

To encourage users to reflect on issues related to their own experiences online, at the beginning of the survey we asked participants how much time they spend online, which websites they visit, and how satisfied they were with their experience searching for partners online.

MSM are spending a significant amount of time online looking for partners, with nearly half of our sample reporting six or more hours per week. Although all recruitment occurred online, which limits the generalizability of these data to all MSM, this nonetheless suggests a high level of usage in this large sample.

The responses indicate that most men are only rarely or sometimes getting what they want during their online searches, with only 10% reporting they are "often" finding what they want.

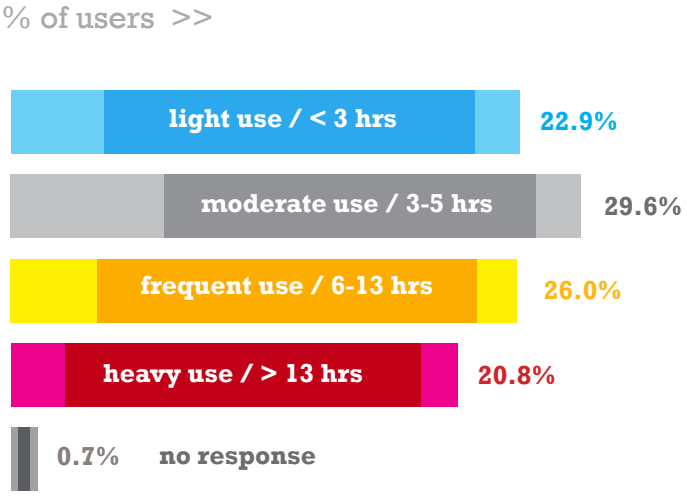
We asked participants which sites they visited in the last six months. We provided them with a list of 49 of the most popular dating and hook-up sites and also left a space for participants to list other sites.

We found that a small number of sites attract the majority of MSM online. While many respondents reported using multiple sites, 61% reported visiting Adam4Adam.com, perhaps because this website provides the most features free of charge.

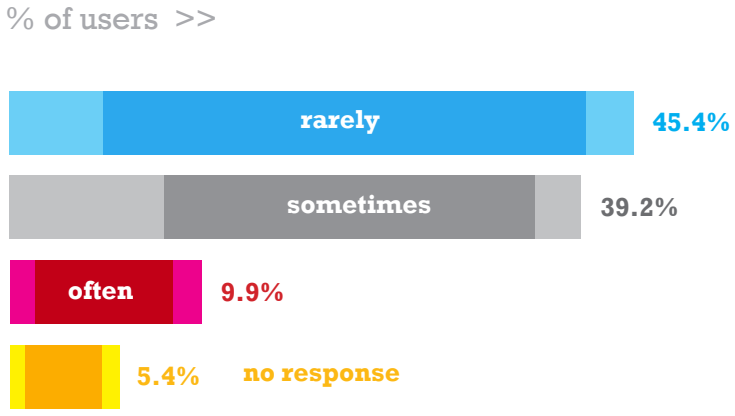
We asked survey participants to list their top three sites for meeting men online. As the list on page 11 shows, participants ranked Adam4Adam as their favorite site for meeting other men, followed by Manhunt and Craigslist. [i]

[i] Grindr is not a website, but a mobile phone application which utilizes GPS to allow users to search for partners nearby.

"IN A TYPICAL WEEK, HOW MANY HOURS DO YOU SPEND ONLINE LOOKING FOR GUYS?"



"HOW OFTEN DO YOU GET WHAT YOU'RE LOOKING FOR ONLINE?"



PERCENT OF RESPONDENTS WHO VISITED EACH SITE (TOP FIFTEEN):

bigmusclebears10%
bigmuscle10.7%
barebackrt10.8%
connexion12.0%
daddyhunt12.3%
bear41112.4%
men4sexnow13.7%
myspace17.2%
grindr21.9%
gay.com31.3%
facebook42.4%
dudesnude46.8%
craigslist55.1%
manhunt55.1%
adam4adam61.1%

PERCENT OF RESPONDENTS WHO NAMED THE FOLLOWING SITES AS THEIR FAVORITE (TOP FIFTEEN):

adam4adam37.9%
manhunt27.6%
craigslist19.6%
dudesnude19.5%
gay.com6.6%
grindr6.5%
facebook6.4%
blackgaychat6.2%
bear415.9%
barebackrt4.3%
connexion4.2%
daddyhunt3.1%
silverdaddies2.8%
myspace2.0%
recon1.8%

Interventions and strategies

We grouped the strategies into eight categories. A complete list of strategies can be found in Appendix (page 30).

The first two categories include strategies that help users make informed choices about their partners, including preferences for safe sex, serosorting, and other characteristics.

1. Ways to search for partners: Using websites which serve a specific population; or a chat room, list or area within a more general website to seek out a specific type of partner. (e.g., men interested in "safe sex only," "barebacking," HIV-positive men; or men of a specific age, race, educational background)
2. Profile options which users use to display their own preferences and characteristics, and choose partners on the same website with specific characteristics as well. Examples include "safe sex only," "barebacking," "HIV-positive," and physical characteristics such as age or race.

These next four categories include a range of behavioral and information-based interventions.

3. Information about sites: users' reviews of sites, statistics about sites' members (percent of men looking for safe sex only, or looking for barebacking, etc.), and number of users who have been diagnosed with syphilis. These would be hosted on outside, neutral sites.
4. Health information, such as HIV and STD information
5. Information about meeting partners and socializing (suggestions for how to write online profiles, how to find other social activities in users' areas)
6. Education and outreach activities (individual and group-level online interventions)

These last two categories include testing and partner notification strategies.

7. HIV/STD testing options (reminders to get tested, HIV/STD testing directories)
8. Partner notification options for letting partners know about potential exposure to HIV/STDs (including health-department initiated, patient-initiated, or e-cards). [27]

Each participant was asked to rate 41 different online strategies for reducing HIV and STD transmission on the 5-point Likert scales.

Those strategies that received a score of 4 or 5 by 50% or greater among all three stakeholder groups were considered to be supported by the groups.

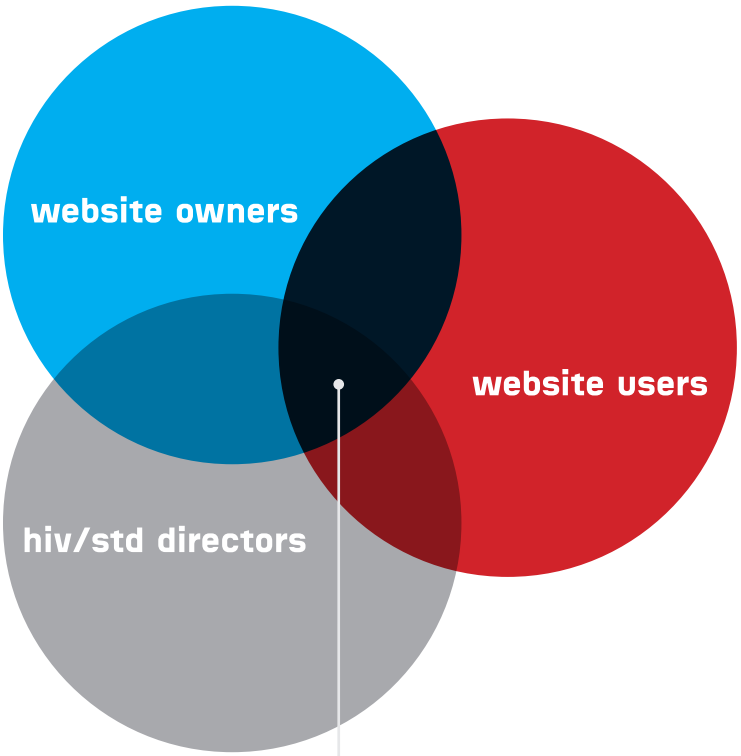
>>> "These sites should make every effort to make sure that its users are informed and empowered to make decisions that are right for each individual in a way that isn't heavy handed or preachy, but that emphasizes fun and responsibility." —WEBSITE USER

Agreement between stakeholders

There were eight strategies that were supported by all three stakeholder groups. (Figure 4)

Pages 14-21 show how each strategy was rated by each of the three stakeholder groups:

Figure 4.

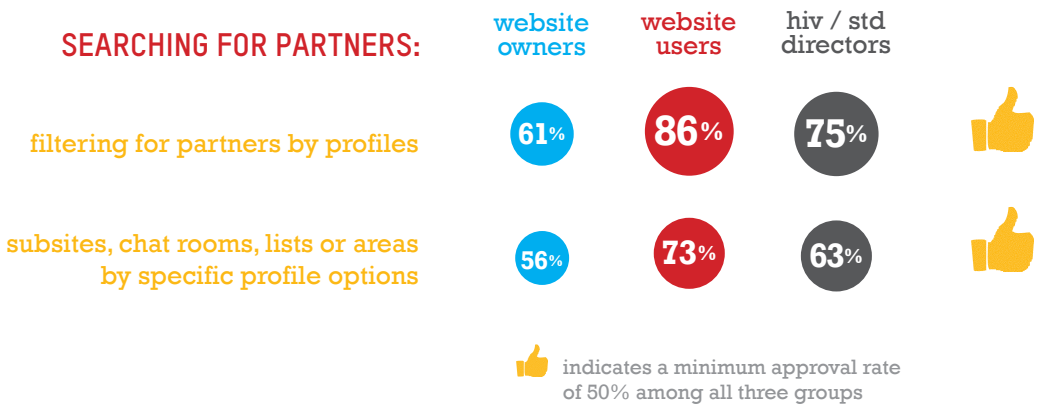


1. Filter partners by their profile information
2. Online STD testing directory by zip code
3. Subsection of sites for specific sexual interests
4. Include safe sex preference as a profile option
5. Access to sexual health experts
6. Access to sex-positive videos
7. Automatic testing reminders
8. Online partner notification

Stakeholders' Beliefs About Specific Interventions

Ways to search for partners

These strategies allow users to filter or use separate areas of a site in order to search for partners with specific characteristics (i.e. race, age, HIV status, safer sex preference). Both of these strategies were supported by more than 50% of all three stakeholders.



Profile options

Many of these options are available on some or most websites, while some options are not available on any site.

We provided an initial list of 12 profile options for the HIV/STD Directors and Website Owners to rate. After getting feedback from them, we added nine more for the users to rate on their survey.[ii]

The only profile option which scored above 50% in all three stakeholder groups was "safe sex preferences" (e.g., "always," "sometimes," "needs more discussion"). See figure 5.

Specific sexual behaviors and HIV status came close to being rated 50% by all groups.

Since some of these options may not exist on any sites, it is possible that users' rankings were affected by their lack of familiarity.

[ii] The initial list of 12 profile options included:

- safe sex preference (always; sometimes; needs more discussion)
- specific sexual behaviors (top; bottom; oral; jacking off; etc.)
- HIV status
- date of last HIV test
- date of last STD test
- relationship status (single, partnered, etc.)
- looking to hookup (yes, no)
- looking to date (yes, no)
- hep B status
- hep C status
- PnP (party and play) preference
- drug use preference.

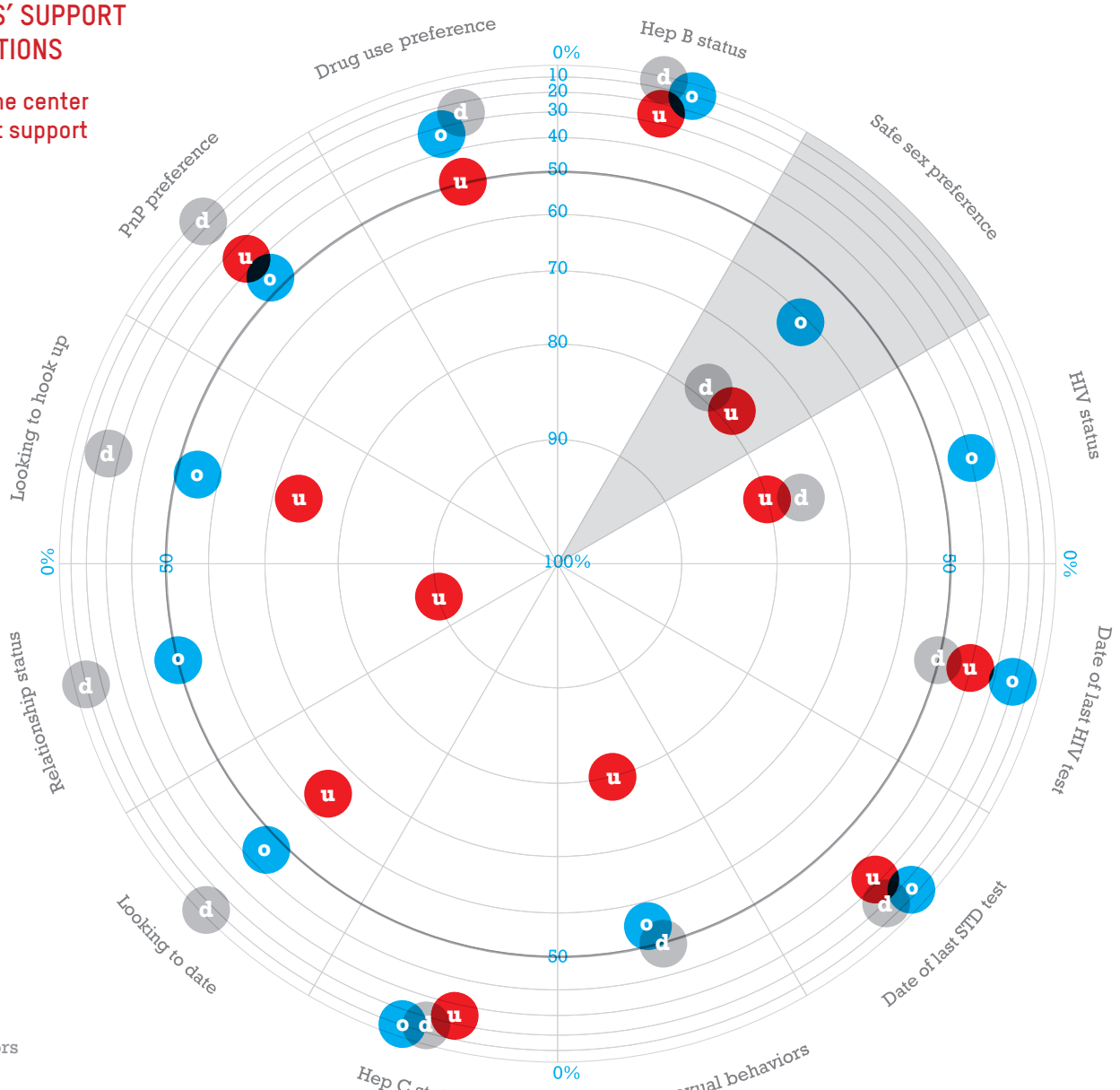
After web owners and HIV/STD directors shared their input, we added nine additional profile options to the user survey:

- herpes status
- S&M/kink/bondage
- "I used a condom the last time I hooked up"
- "I plan to use a condom the next time I hook up"
- race
- poz-friendly (open to sex with HIV positive guys)
- educational background
- income
- age

Figure 5.

STAKEHOLDERS' SUPPORT OF PROFILE OPTIONS

Dots closest to the center indicate the most support



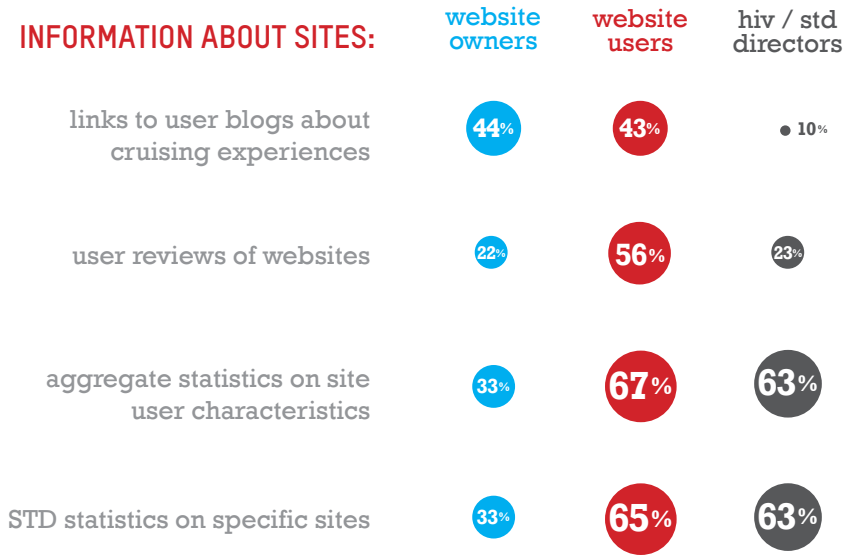
>>> "(I like) helping HIV+ people find other HIV+ people on regular hook up sites. I don't want to have to go to a separate hook up site for HIV+ people." – WEBSITE USER

Information about sites

These items included the following options:

- Links to blogs where users can write about their online cruising experiences
- Having independent websites which publicize statistics about the number of men who had recently received a syphilis diagnosis and reported meeting partners on specific websites
- Reviews written by website users about their experiences on sites.
- Summaries of website users' profiles (e.g., percent of men looking for safe sex only, percent looking for barebacking, etc.)

None of these items were popular with website owners and therefore none of them were included in the list of eight strategies that were supported by all three stakeholders. HIV/STD Directors and website users supported having sites which gave information on aggregate statistics and numbers of syphilis cases reported on different sites, but lower ratings to sites where users could write reviews.



>>> "Some of these ideas are good, it's just finding a way to integrate them into the sites. Changes draw a lot of criticism from our user community. If they see benefit, they usually go along. If it's not obvious, they usually ignore it." – WEBSITE OWNER

Health Information

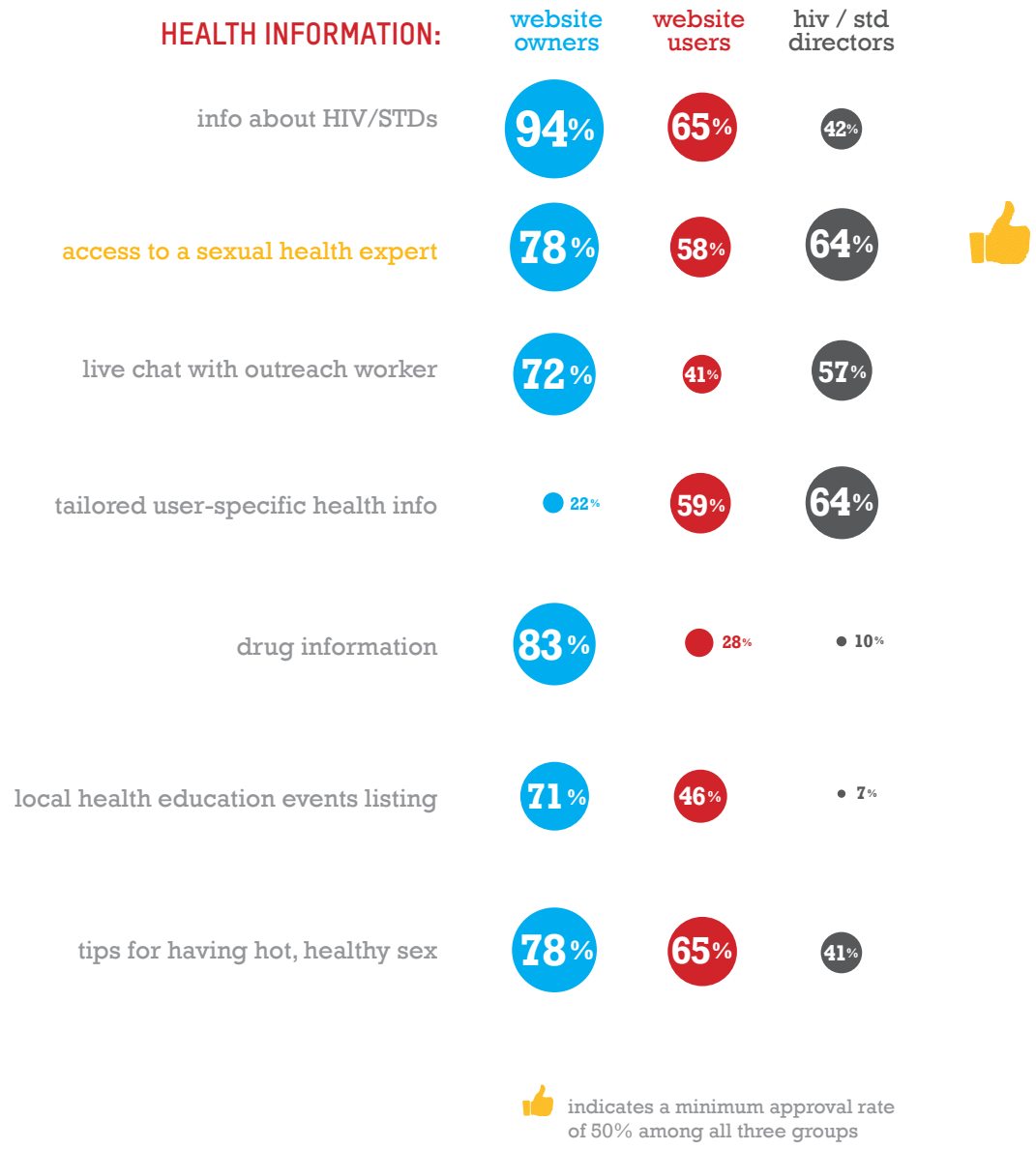
We asked all three stakeholders to rate a number of information-based strategies. These included:

- Live chat with an outreach worker about HIV/STDs, and sexual health
- Access to a sexual health expert
- Health information on HIV and STDs, treatments, etc.
- Entry-screens in which individuals enter personal information and receive tailored health advice.[iii] [28]
- Drug information
- Tips for having hot, healthy sex
- Listings of local health education events

All three stakeholder groups supported having access to a sexual health expert. Users preferred having access to sexual health experts rather than access to outreach workers.

While a majority of HIV/STD directors and users supported entry screens in which individuals enter personal information to receive tailored health advice, only 22% of owners did.

[iii] The tailored health advice was based on an algorithm developed by Harterink and colleagues in the Netherlands. They created a site called "Dateguide NL," which is no longer available. It allowed participants to enter information about themselves, such as the level of experience they had online, their relationship status, and what they were looking for; in exchange, they received information tailored to them. A similar program, which adds video, has been created for the Florida Department of Health, and is available at www.FACEitFlorida.com.



>>> "(I'd like) A way to let guys down easy, when you're not interested, without having to ignore them or write an awkward message." – WEBSITE USER

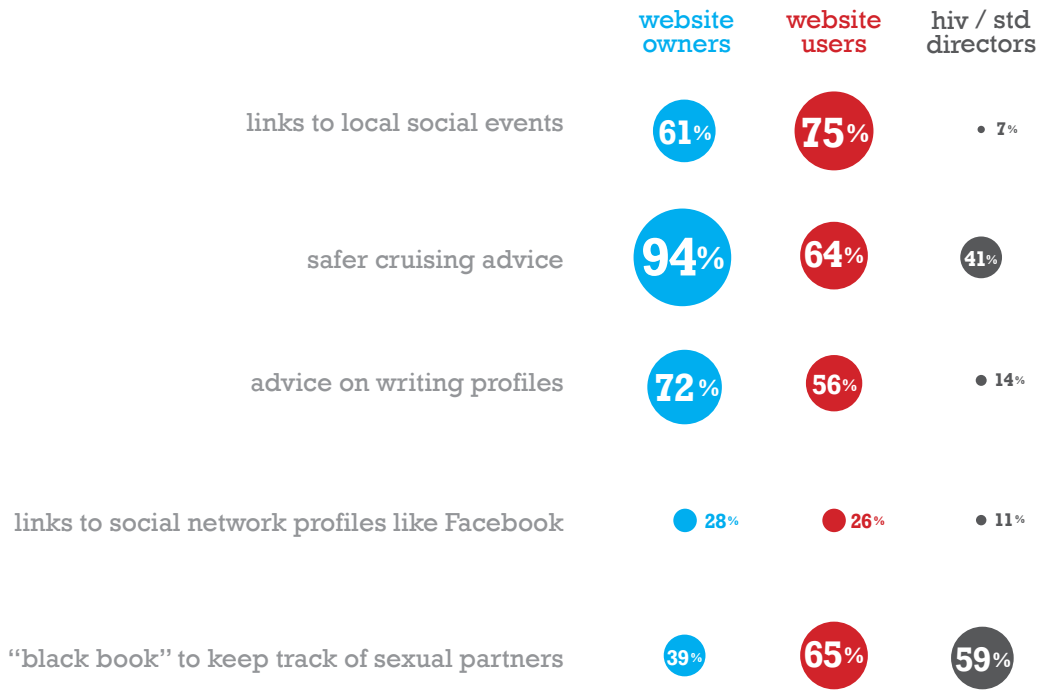
Information about meeting partners and socializing

We also asked stakeholders to rate another group of information-based strategies.

- Providing lists of social events near users
- Safer cruising advice
- Options to link to a social network site such as Facebook or MySpace
- Using an online "black book" to keep track of partners, potential partners, and sexual activity
- Advice on writing profiles

None of the strategies from this set of items were agreed upon by 50% of all three stakeholder groups. A majority of website users supported all of these strategies, with the exception of the links to social network profiles. Users, not surprisingly, appear to prefer to keep information about their sexual networks separate from their personal networks.

We asked only users if they would be interested in having a "guide for how to meet guys online." (This was also added after the web owner and HIV/STD director surveys.) 67% of the respondents said yes.

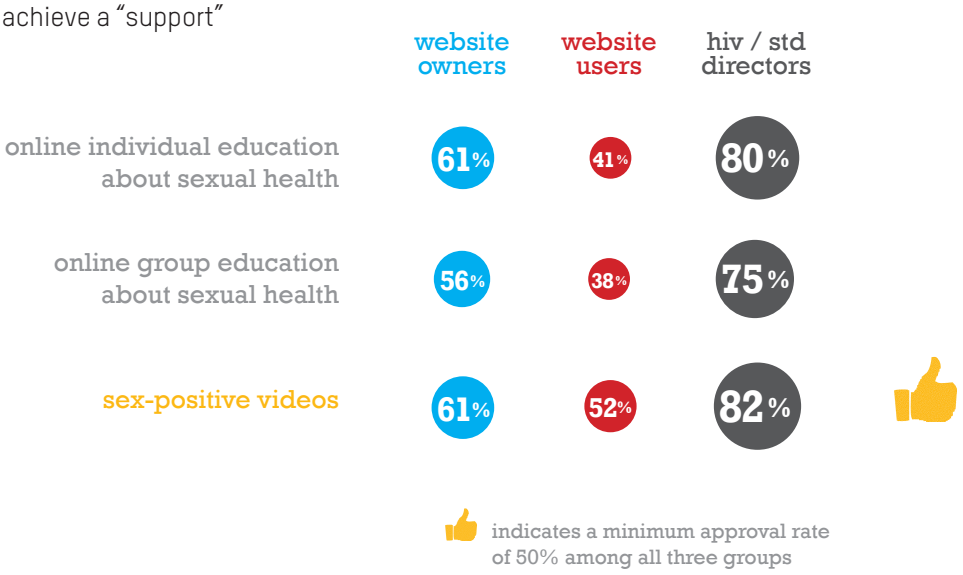


>>> "I think this survey is great and to put these ideas in action would be an excellent thing for the gay community." – WEBSITE USER

Education and outreach activities

We asked stakeholders to rate three educational strategies: individual educational sessions, group educational sessions, and sex-positive videos, which we defined as "videos that show men dealing with issues like safer sex, telling someone their HIV status, or related issues in a sex-positive way."

Only one of these strategies, sex-positive videos, received positive ratings by more than 50% of all three stakeholders. Neither individual nor group education sessions online were sufficiently supported by website users to achieve a "support" rating by all three.

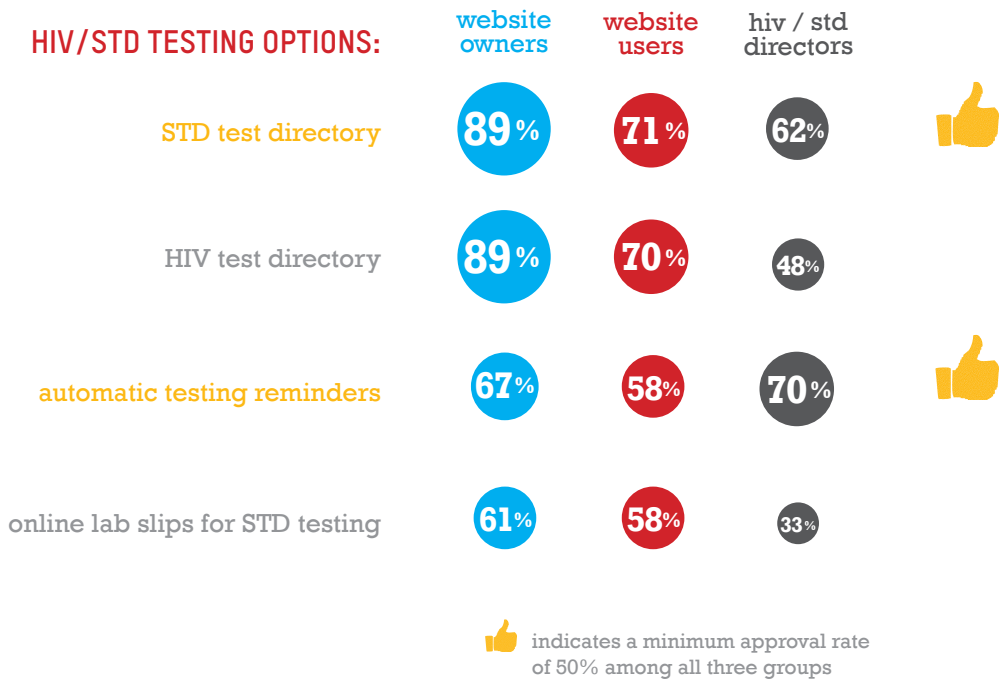


HIV/STD testing options

We asked stakeholders to rate online HIV testing and STD testing directories (which enable individuals to find testing sites in their area by entering their zip code), printable lab slips which enable users to print laboratory slips for STD tests they want and then present them to a commercial laboratory for testing, and automatic reminders from dating and hook-up websites to get an HIV and/or STD test, at an interval that the user chooses. Fifty percent or more of each stakeholder group supported automatic reminders to get tested and online STD test directories.

Only 48% of STD and HIV directors judged that links to HIV test sites would have an impact, just under the number needed to earn our strict definition of "support." However, in practice, one link could lead to both HIVtest.org and findstdtest.org. Both of these URLs lead to the same directory, which is maintained by the CDC.

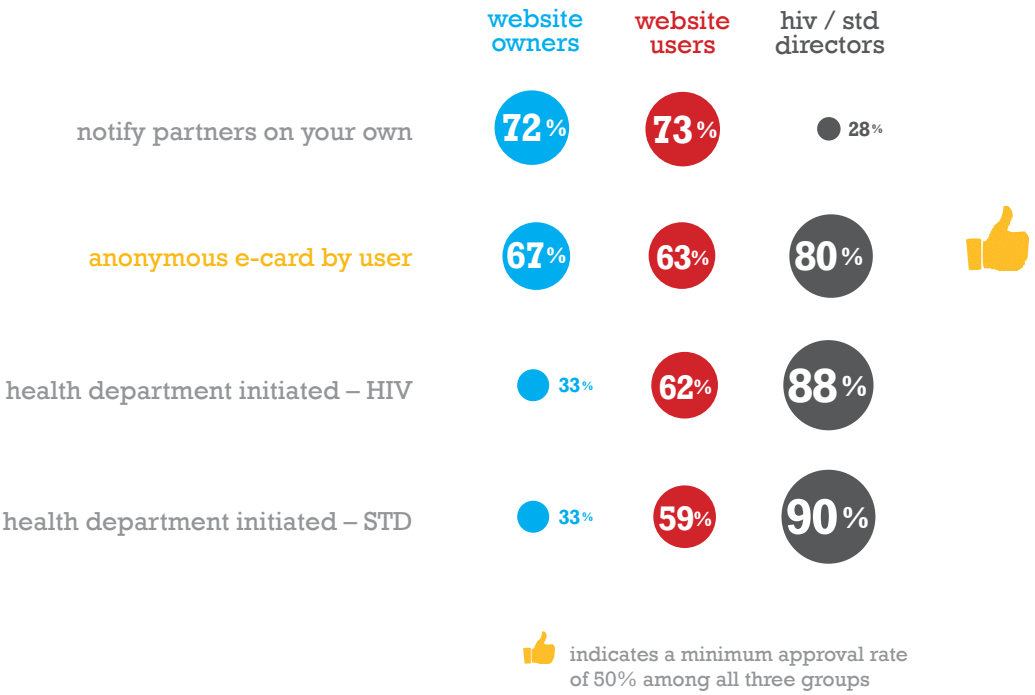
>>> "Free HIV tests seem easy to find, but I'm unsure about free STD tests." – WEBSITE USER



>>> "I think the directories already exist and information can be found (but making it easier to find can't hurt)." – HIV/STD DIRECTOR

Partner notification options

We found that website owners did not support health-department-initiated partner notification online, though in many instances owners have lent their support to individual departments. Owners preferred "on your own" or e-card solutions to health-department initiated partner notification. Users' ratings were generally supportive and didn't vary dramatically, although they were somewhat more supportive of notifying their own partners. HIV/STD directors supported online health-department-sponsored partner notification and e-cards. Of these four options, the one that was supported by the three stakeholder groups was e-cards.



Website User Sub-Analysis

Who uses these strategies may make or break the success of the intervention especially if it is an opt-in intervention. In general, users expressed support for many strategies, with low-risk men more likely to report wanting to use them. We stratified our analyses by website users' risk behavior and other characteristics to determine whether groups at the highest risk for HIV, or those who have decreased access to HIV prevention services, rated the interventions differently.

Many strategies were popular with all users. However, some important distinctions were found among several different subcategories of users.

High-risk participants[iv] were somewhat less willing to use nearly all strategies than lower-risk participants. The two strategies they were *more* willing to use were:

- Providing specific sexual behaviors in their profile
- Stating an interest in SM/kink/bondage in their profile

HIV-positive participants were somewhat less willing to use most strategies than HIV-negative participants. For example, 85% of HIV-negative participants supported including their HIV status on their profile, compared to 66% of HIV-positive participants.

Here were the seven strategies HIV-positive respondents were *more* willing to use:

- Subsites, chat rooms, or lists with specific options
- List of nearby social events
- The following profile options:
  - "PnP" preference option
  - Specific sexual behaviors
  - Looking to hook-up option
  - SM/kink/bondage
  - Poz-friendly

Race: African American participants were generally more supportive of strategies than white participants. However, while a majority of African American participants supported "HIV status" and "safe sex preference" as profile options, they did so at slightly lower levels than White participants.

Age: Older men were somewhat less supportive of most strategies. However, men over 65 did give higher rating than younger men to including "HIV status" and "poz-friendly" as profile options. While website users expressed low levels of support for online outreach, a majority of men under 25 did support it.

Rural men:[v] Men from primarily rural and urban areas gave similar ratings to most strategies. However, there was one notable difference: rural participants were more likely to support online individual and group education sessions. While these strategies were still not overwhelmingly supported, it may suggest that they may be more popular in states where in-person educational sessions may not be as easily accessible.

[iv] We defined this as people having two or more unprotected partners in the previous six months, where the partners are of different HIV status.

[v] For this analysis, we were particularly interested in how interventions were considered by men from the 10 states with the fewest same sex couples. These included: Alabama, Idaho, Iowa, Louisiana, Mississippi, Montana, North Dakota, South Dakota, West Virginia and Wyoming

Differences Among Stakeholders

Strategies that no group supported

There were several strategies that did not earn the support of a majority of any of the three stakeholder groups. These included:

- Blogs about users' experiences meeting partners online
- Links from dating websites to social network sites, such as Facebook

Additionally, several of the profile options that we presented failed to gain the support of a majority of any of the three stakeholders:

- Hepatitis B and C status
- Date of last STD test
- Drug use preferences
- "PnP" ("Party and Play") preference

Differences Among Stakeholders

We also believed that the areas of disagreement were just as important as the areas of agreement. There were several strategies which were rated low by one of the three stakeholders yet rated high by the other two.

Website owners >> low level of support
HIV/STD directors and users >> high level of support 👍

- Statistics on the number of STDs reported by users of different websites posted on a neutral site
- Statistics which would aggregate characteristics of website users from different websites, posted on a neutral site (i.e., number of individuals on the site indicating they prefer safe sex)
- Entry screens which would have an algorithm with tailored user-specific health information
- A "black book" which would allow users to keep track of past sexual partners
- Online partner notification initiated by Health Departments for both HIV and STDs
- Listing HIV status on profiles

These data do not reveal the reasons for website owners' objections to these strategies, which future conversations will help clarify.

User data will help inform conversations between website owners and HIV/STD directors, and avoid unnecessary guesswork about how website users might react to strategies which either owners or directors believe may be problematic. It is very possible that our data from users, indicating their support, may help further their adoption by website owners. In any case, more conversation about the data is needed to build consensus.

HIV/STD directors >> low level of support
Website owners and users >> high level of support 👍

- The following options in profile screens:
  - "Relationship status"
  - "Looking to date" and "looking to hook-up"
  - Specific sexual behaviors
- Including links to local social events
- Having infected individuals notify partners on their own as a partner notification strategy
- Information about HIV/STDs
- Tips for healthy, hot sex
- Safer cruising advice
- Advice on writing profiles
- HIV test site directory
- Printable STD lab slips

Due to the way we asked HIV/STD directors to rate some of the items on the survey, it's likely that they expressed support for fewer strategies than if we had asked them in the exact same way as users and owners.

Research showing the ineffectiveness of patient-initiated partner notification [29] compared to other strategies may help inform additional conversations regarding these strategies between HIV/STD directors and website owners.

Users >> low level of support
Website owners and HIV/STD directors >> high level of support 👍

There were three strategies which users rated low, but HIV/STD directors and website owners rated high. These included:

- Individual education sessions
- Group education sessions
- Online chat with outreach worker

If HIV/STD directors and website owners feel these strategies are particularly important, it may be useful to conduct further qualitative research with users. Alternately, it may be helpful to HIV/STD directors to understand that some of the strategies may not be popular among users, and will either require significant promotion to attract participants, increased targeting to specific subgroups of website users who do express greater interest, or abandoning these strategies altogether.

Limitations

Sampling methods

We used a convenience sample for all three stakeholder groups. We were able to reach a high percentage of the HIV/STD directors and are confident about the generalizability of the results from them. However, despite our numerous efforts and invitations to website owners and managers, one refused to participate and several did not respond. Since we did not receive responses from all websites, we have no way of knowing how generalizable the results are. However, we are heartened by the fact that we obtained responses from many of the most popular sites, as well as a diverse range of sites.

There is no census of gay men/MSM online. Therefore, it is difficult to establish representative samples. We purposely sought out participation from groups which we believe to be traditionally underrepresented in studies (for example, men of color). Additionally, we deliberately sought out men who were at very high risk; 290 (10%) of the men in our sample reported two or more partners in the past six months whose HIV status was either unknown or known to be different than their own, and with whom they had unprotected anal sex. These criteria represent a higher level of risk than used in many studies, which often define risk as unprotected anal sex with one partner.

Data Collected

We did not ask web users about drug use, which meant that we could not analyze whether there were differences in strategies related to drug use between those website users who did use recreational drugs and those who did not.

It is also important to note that we assessed perceptions by all three parties, including HIV/STD directors. Thus, website owners can accurately describe their level of interest in hosting an intervention, and website users can describe their level of interest in participating in one. However, for some questions we asked whether or not an HIV/STD director believed there would be an impact. Unless they were relying on one of the few studies about one of the strategies or interventions, they could only estimate the potential impact. On the other hand, they could accurately represent their level of interest in supporting a specific intervention.

It was very difficult to describe interventions and strategies briefly. We took every effort to balance out the need to describe them as clearly as possible, while keeping the survey as brief as possible. While we pretested the survey with multiple individuals, it is possible that some questions suffered from a lower level of construct validity.

Changing Technology

The use of technology to seek new partners is a rapidly evolving field. Most notably, there has been a sharp increase in the use of technologies which use GPS (Global Positioning Systems), such as Grindr, to allow searching for nearby partners. While we did not include these in our surveys, some of the same principles may apply.

>>> "Thank you so much for putting this survey out! I can't wait to see its results in action!" – WEBSITE USER

Discussion

We initiated this survey out of a belief that HIV and STD rates are unacceptably high amongst MSM, and that we need to build a healthier environment to support healthy decision-making for individuals who are not attracted to behavioral interventions, as well as to complement existing behavioral interventions. Even with the advent of new biomedical approaches – the use of treatment to reduce viral load, and the use of Pre-Exposure Prophylaxis – we believe that in order to succeed, public health must also strive to improve the environment in which risk-taking behaviors take place. We have deliberately sought out win-win-wins: that is, to find ways that people can have the maximum enjoyment and individual agency over their own sexual expression and behavior, have website owners run businesses as efficiently and profitably as possible, and have public health leaders make the most strategic decisions possible with increasingly scarce resources.

In many areas of public health, industry frequently assigns responsibility to individuals; public health often assigns responsibility to industry; and individuals assign responsibility to both. We believe that the only way to succeed in promoting public health, and more specifically, to reduce STD and HIV infections, is for all three stakeholder groups to share responsibility. With this in mind, we sought to find ways to play to the strengths of all three groups. We found that all three groups were willing to participate in prevention, and in very specific ways. For example, directors are willing to create and maintain directories of STD test sites; websites are willing to have links to them; and users are willing to access them.

A significant finding is the sheer number of strategies for which there was agreement among all three stakeholders. (See Fig. 4, page 13.) While some of the sites are already implementing these strategies, this survey may help encourage other sites to adopt these strategies by providing data which show that their customers react to them favorably and are willing to participate in them.

There are, not surprisingly, important differences. We found that website owners gave low ratings to providing data to users on the number of individuals who have been diagnosed with STDs who report meeting partners on their site. Website owners are likely to be concerned that such data may discourage users from accessing their site. This may not be a strategy to pursue, given the website owners' hesitancy. However, opening dialogue with website owners about what additional data they would be willing to share with users may plant the seed for development of future strategies.

Users, for their part, indicated that they were unlikely to participate in individual or group educational sessions online. Only participants from states with few gay couples, which may have fewer educational opportunities, rated these somewhat higher. Furthermore, one possible explanation for users assigning low ratings to some items, such as including having been diagnosed with Hepatitis C on a profile screen, is that they had rarely or never considered them as an option and they are not currently included on most websites.

HIV/STD directors reported strongly preferring partner notification strategies that are offered by the public health department or through an e-card rather than relying on individuals to tell their partners themselves. This is an example of a perception by HIV/STD directors about which strategies would impact HIV/STD transmission that is strongly backed by data from multiple studies that support their belief in the much greater success of notification strategies that do not rely solely on the individual to notify partners.

It is important to take into account that while all three stakeholder groups rated some strategies higher than others, among users there were relatively few strategies that as a group they rated very high or very low. This may reflect a lack of strong feelings about HIV and STD prevention strategies in general. It is likely that if users had been asked about offline interventions, such as street outreach or behavioral risk-reduction workshops, they would elicit a similar response.

We were impressed by the number of participants who were willing to take advantage of user profile screens to ask and share important information that will help them make informed decisions in choosing their sex partners. The Internet appears to make it easier for them to disclose preferences about risk behavior, HIV status, and other characteristics, many of which are challenging conversations to have in person.

We were surprised by the high number of qualitative comments we received from users who took the time to thank us for asking for their input and who said they were looking forward to the study results. We received 331 qualitative entries, 111 of which included statements which thanked us, said they liked the survey and looked forward to the results. Conversely, one respondent complained about the length of the survey and one questioned our judgment in spending time in this arena. If we are correct that users have few strong feelings about the strategies proposed, they were enthusiastic about having the opportunity to give input into the process of developing and prioritizing them. This may be instructive to other intervention designers and their own formative research processes; it may be worthwhile to seek input to a variety of options rather than offering just minor variations on one or two strategies.

Finally, to our knowledge, this study resulted in our being able to compile the most comprehensive list of website owners and managers and their contact information that exists. Furthermore, their participation in this survey, and their stated willingness to continue to discuss these issues, represents an important step in building partnerships with website owners which will support online strategies.

Next Steps

In order for this study to have as much impact as possible, we are sharing these results with website owners, HIV/STD directors, and website users. These data provide a starting point which we hope will be used for joint decision making.

In order to facilitate that process, we recommend that a national workgroup be formed, including representatives of the National Coalition of STD Directors, the National Alliance of State and Territorial AIDS Directors, and the Centers for Disease Control and Prevention. This group should meet with website owners in order to discuss these findings and prioritize next steps. There are many strategies which all parties agreed upon, and we recommend that these be adopted as soon as possible by as many websites and HIV/STD directors as possible. If directors think these strategies will reduce HIV/STD transmission, website owners are willing to support them, and website users are likely to utilize them, what's stopping us from implementing them today?

Additionally, in collaboration with the website owners and users, we recommend adapting current strategies, or developing new ones, to reach both HIV-positive and high-risk men who gave somewhat lower ratings to many interventions. The workgroup should also discuss what should be done with current strategies that were rated low by website users, such as outreach and educational sessions, which may free up resources for other interventions. For those interventions which all three stakeholders rated high, such as STD test site directories, the workgroup should also discuss how to make them as easily accessible as possible. Website users may seek access to this kind of information more if they can easily find them.

In addition to directors' perceptions of impact, the work group should review published studies of the interventions included in this survey, where available. Researchers and epidemiologists can make an important contribution by monitoring the impact of these interventions as they get developed and/or modified. Network modelers would be able to contribute useful knowledge about the potential epidemiologic impact of different rates of utilization of strategies by men with high, medium, and low-risk profiles as well as those who are infected with STDs including HIV and those who are not.

This study revealed key strategies that can be put in place now as well as areas for future dialogue between HIV/STD directors and website owners. With HIV rates on the rise among MSM nationally, now is the time to act.

Qualitative Write-in Responses

We asked website users which other features they would like to see on a dating or hook-up site and whether they had any additional comments or suggestions. We elicited 780 responses, most of which fell into these six themes. Some reported that one or another website already had features which would help address some of their concerns.

Profile information. Respondents reported being generally willing to share more information on their profile and wanted more information from other users. However, they did not react favorably to being required to fill out certain fields. Respondents were very willing to share age and relationship status, and HIV status, but were not willing to share income or educational background.

Safe sex information. Many respondents wrote that they were not opposed to getting health and safe sex information. Some indicated that they wanted this information to be accessible when and where they wanted, but that it shouldn't interrupt their online search.

Selection vs. stigma. While the internet makes it highly efficient to find partners, many respondents wrote that this can and often does evolve into rejection based on characteristics such as age, race, HIV status, which many found distressing. As one respondent wrote, "I would like a filter where you can delete all people who insult other races by stating no blacks or no Asians. You can state what you like without insulting other people."

Verifying. Many respondents wanted to be able to maximize privacy while still being able to verify other users' characteristics. One user wrote, "It is scary to use some websites without knowing if the other person is real or not. Although I try to make certain that the individual seems legitimate, I have no doubt that I have sent my pictures/stats to fake people or even to potential stalkers." Another wanted website owners to verify ages, and said, "I'm tired of being what seems like the only 40+ person who's honest about my age."

Rating/Reviews. Many respondents wanted to be able to get feedback from people who have previously met their prospective partner regarding their honesty and reliability. One respondent wrote, "This is not for feedback on the sex, but rather on the profile used by the cruiser. (He doesn't look like his pictures; he attempted unsafe sex with me; he pressured me to do things I was uncomfortable with.)" Another suggested, "A feedback rating kind of like E-Bay's sellers' reputation grading."

"I want more options." Respondents suggested a number of innovations including zip code search, mapping, live video camera interactivity, YouTube videos on profiles, and knowing who looked at their profiles, better access to sites through mobile phones, and a place to write when they were going to meet someone and where, in case of something going wrong.

Acknowledgments

We'd like to extend a heartfelt thank you to *all* of the participants of this study: the thousands of website users whose feedback will help assure us that whatever strategies are adopted, they will be well-accepted by the community; STD and HIV program directors, who took time to assess what would have the biggest impact on health; and the website owners and managers who have taken time from their work to help us understand how best to leverage the internet's many resources to promote health for us all.

Additionally, we'd like to thank Dana Cropper-Williams and Kelly Mayor at the National Coalition of STD Directors and Dave Kern and Julie Scofield at the National Association of State and Territorial AIDS Directors for their assistance.

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Appendix

Ways to search for partners	Brief description of strategy
searching for partners using data in profiles	filtering or searching for partners on sites using data from profile fields (i.e. safe sex preference, HIV status)
subsites, chatrooms, lists, or areas for specific sexual interests	areas within the main site to find men with certain characteristics (i.e. HIV postive or prefer safer sex)

Profile options	
Hepatitis C status	option to include hepatitis C status
Hepatitis B status	option to include hepatitis B status
HIV status	option to include HIV status
Date of last HIV test	option to share date of most recent HIV test
Date of last STD test	option to share date of most recent STD test
Specific sexual behaviors	option to include sexual preferences (i.e. topping, oral sex, etc)
Safe sex preference	option to include safer sex preference / condom use (i.e. always, sometimes, needs more discussion)
Looking to date	option to include preference for dating
Relationship status	option to include status of relationship (single, in a relationship etc.)
Looking to hook up	option to include preference for hooking up
PnP (party and play) preference	option to include preference for not using crystal meth during sex
Drug use preference	option to include drug use preference

Information about sites	
links to users' blogs about cruising experiences	websites would include a link to a site where users could share their cruising experiences
users' reviews of websites	a website, not affiliated with any cruising website, where users could write reviews of cruising websites
aggregate statistics on site user characteristics	a website that would provide aggregate statistics on site user characteristics (i.e. percent of men who say they are looking for "safe sex only"). This information would be provided by website owners and hosted on a site that would be updated several times a year
STD statistics on specific sites	an online guide that lists the number of individuals diagnosed with syphilis or other STDs who report meeting their partners on specific websites. The data would be provided by public health departments and updated several times a year

Health information	
information about HIV/STDs	health information on HIV/STDs, treatments, etc
sexual health expert	access to a sexual health expert that could answer users' questions
online chat with outreach worker	live chat with an outreach worker about HIV, STDs, and sexual health
tailored health information algorithm	websites have screens for users to enter information about themselves in order to receive tailored health information
drug information	information about methamphetamine and other drugs
listing of local health education events	a geo-targeted list of local health education events
tips for having healthy, hot sex	tips for having fun, healthy, hot sex

Information about meeting partners and socializing	
links to local social events	a list of geo-targeted local social events
safer cruising advice	advice on safer cruising, including safety tips for hooking up
advice on writing profiles	advice on how users can write effective profiles or ads without being offensive to others
links to social network profiles	profiles have an option to link to a user's myspace, facebook, or other social network profile
"black book" to keep track of sex partners	online personal "black book" to keep track of partners and potential partners, and sexual activity

Education and outreach activities	
sex-positive videos	videos which show men dealing in a sexually positive way with issues of disclosure, safe sex, etc
online group education about sexual health	online group education sessions about sexual health topics
online individual education about sexual health	online individual education session about sexual health topics

HIV/STD testing options	
STD test directory	a directory of STD test sites searchable by zip code or county, such as findstdtest.org
HIV test directory	a list of HIV test sites, searchable by zip code or county, such as hivtest.org
automatic reminders to get tested	reminders to users, at an interval they choose, to get tested for HIV and/or STDs
online lab slips for STD testing	printable lab slips signed by a physician, which would allow users to go to local labs to get tested for STDs

Partner notification options	
notify partners on your own	self-referral (patient notifies own partners of possible exposure)
anonymous e-card by user	use of a website, such as inspot.org, that allows patients to notify their partners about possible exposure
health department-initiated - HIV	3rd party referral: health department notifies partners of possible exposure to HIV
health department-initiated - STD	3rd party referral: health department notifies partners of possible exposure to STDs